



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/698,124

10/31/2003

Kenneth T. Heruth

P0009986.00

8969

27581 7590 08/27/2007  
MEDTRONIC, INC.  
710 MEDTRONIC PARKWAY NE  
MINNEAPOLIS, MN 55432-9924

EXAMINER
----------

MACNEILL, ELIZABETH

ART UNIT	PAPER NUMBER
----------	--------------

3767

MAIL DATE	DELIVERY MODE
-----------	---------------

08/27/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/698,124

Applicant(s)

HERUTH, KENNETH T.

Examiner

Elizabeth R. MacNeill

Art Unit

3767

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-8,10,11,13-22 and 26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8,10,11,13-22, and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 28 June 2007 has been entered.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,2,4-8,10,11,13-22, and 26 are rejected under 35 U.S.C. 103(a) as obvious over STULTZ (US 2002/0156462) in view of Ellinwood, Jr (US 4,003,379)

Regarding claims 1,9 and 26, Stultz teaches a method for sensing food intake comprising measuring a parameter, estimating a relationship, and delivering a programmed amount of one or more medications as a function of the sensed physiological parameter (P0012). Stultz does not teach using the electrical activity and motion of the patient's gastrointestinal tract.

Ellinwood teaches sensing the electrical activity of the patient's gastrointestinal tract as a potentially useful measurement to determine the delivery of medication to the patient (Col 2 lines 15-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the activity of the gastrointestinal tract as the sensed parameter in order to respond to the patient's food intake.

Regarding claims 2,4-8,16-18, 24 and 25 Stultz teaches the measurements of the "muscle tone, heart rate, respiration rate, blood oxygen saturation, physical activity, temperature, glucose level, and the like" (P0012)

Regarding claims 10 and 19, Stultz teaches "The sensor may sense the glucose level present in body fluids, and in response to sensing a glucose level that is out of range of predetermined acceptable levels, cause the pump to take appropriate corrective action by delivering an appropriate medication(s)" (P0029). It is well known in the art that insulin and glucagon are known medications that are appropriate for the treatment of glucose levels (See also MAULT (US 2003/0208113, P0038)

Regarding claim 11, Stultz again teaches the estimation of a physical activity level (P0012) and the delivery of an appropriate medication. It is well known in the art that glucagon is a known medication (See also MAULT (US 2003/0208113, P0038)

Regarding claim 13, Stultz teaches a system comprising a sensor (18), a processor (34), and a drug delivery system (30) (Fig 3)

Regarding claim 14, the drug delivery system comprises a reservoir (30) and a pump (33)

Art Unit: 3767

Regarding claim 15, the system is implanted (Fig 4)

Regarding claim 20, the system comprises a first reservoir (30a), a first pump (35a), a second reservoir (30b) and a second pump (35b). It is well known in the art that insulin and glucagon are known medications that are appropriate for the treatment of a patient and could be stored in either reservoir (See also MAULT (US 2003/0208113, P0038)

Regarding claim 21, the processor generates first and second signals for the control of the separate pumps (Abstract, P0036)

Regarding claim 22, there is a memory coupled to the processor (P0036, P0030)

Regarding claim 23, Stultz teaches a computer readable medium which causes a processor to estimate a quantity of food consumed by a patient and deliver a therapy (P0029)

### ***Response to Arguments***

3. Applicant's arguments filed 28 June 2007 have been fully considered but they are not persuasive. Applicant has argued that "gastrointestinal motility" is not the same as "electrical activity of the patient's gastrointestinal tract." Upon remove of the arguments and the affidavit of Kenneth T Heruth, the examiner finds no reason to accept this position. First, applicants have provided no alternate interpretations of gastrointestinal motility. Second, any motility creates electrical signals due to muscle contractions. Lastly, Ellinwood specifically teaches the measurement of electric potential (Fig 2) in the heart. Measurement of a gastric electrical signal would be an obvious conclusion from Ellinwood's teachings of measuring at least some kind of signal in the gastrointestinal

tract since his device is explicitly capable of measuring an electrical signal. The rejection is maintained.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth R. MacNeill whose telephone number is (571)-272-9970. The examiner can normally be reached on 9:00-5:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Sirmons can be reached on (571) 272-4965. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ERM

*Elizabeth R. MacNeill*  
7/31/07

KEVIN C. SIRMONS  
SUPERVISORY PATENT EXAMINER

*Kevin C. Sirmons*